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United States Patent [19]**Powrie et al.**[11] **Patent Number:** **5,601,815**[45] **Date of Patent:** **Feb. 11, 1997**[54] **IL-4 AND IL-10 TO DOWNREGULATE DELAYED-TYPE HYPERSENSITIVITY AND CYTOKINE EXPRESSION BY T-CELLS**[76] Inventors: **Fiona Powrie**, 2250 Latham St. No. 22, Mountain View, Calif. 94040; **Robert Coffman**, 239 Echo La., Portola Valley, Calif. 94028[21] Appl. No.: **531,994**[22] Filed: **Sep. 21, 1995****Related U.S. Application Data**

[63] Continuation of Ser. No. 933,462, Aug. 21, 1992, abandoned.

[51] **Int. Cl.⁶** **A61K 45/05**[52] **U.S. Cl.** **424/85.2**[58] **Field of Search** 424/85.2[56] **References Cited****U.S. PATENT DOCUMENTS**5,017,691 5/1991 Lee et al. 535/351
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[57]

ABSTRACT

The invention provides in vivo methods for potentiating IL-10 mediated inhibition of cytokine production by T cells in a mammal. The method comprises co-administering to the mammal an effective amount of IL-4 and IL-10, preferably intravascularly.

17 Claims, No Drawings